

Appl. No.: 10/777,947  
Amdt. Dated: 11/15/2005  
Off. Act. Dated: 9/21/2005

### **REMARKS/ARGUMENTS**

#### **1. Introduction**

Applicant has carefully considered all of the Examiner's comments. Claim 1 is alleged objected. Claims 8-6, 29 and 30 are alleged rejected. Claims 1-33 are pending. Claim 29 has been amended. Applicant responds below.

A typographical correction in the specification previously cited in a Notice of Non-Compliant Amendment mailed 11/10/2005 has hereby been resubmitted in a corrected form.

#### **2. Claim 1 "capable of" objection**

The Examiner has objected to the use of "capable of" as terminology in Claim 1. Applicant respectfully traverses the rejection, and requests reconsideration.

The text of Claim 1 is reproduced below in part for convenience:

1. An X-ray imaging device for imaging a sample,  
wherein the sample is within an X-ray shielded volume  
comprising:

a) an X-ray source capable of emitting an X-ray beam  
within a beam path to illuminate the sample...

Applicant has been unable to determine any citation in the patent law, rules, or the MPEP relating to the proscribed usage of the phrase "capable of".

The MPEP does, however, have two citations, with emphasis added:

1) "*In re Vaeck* 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991) (claiming a chimeric gene capable of being expressed..." (MPEP 2164.01, page 2100-187); and

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2) "Disclosing a microprocessor capable of performing certain functions is sufficient to satisfy the requirement of section 112, first paragraph..." (MPEP 2163, page 2100-173).

As the MPEP, patent laws, and patent rules cite no prohibition on using the phrase "capable of", Applicant kindly requests reconsideration of the objection.

Additionally, on November 2, 2005, Applicant undertook a search of the United States Patent and Trademark web search, and search for the phrase "capable of" in the claims of the issued patents since 1976. The results are shown on the next page:

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**Patent Database Search Results: acm/"capable of" in 1976 to present**

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**Searching 1976 to present...**

**Results of Search in 1976 to present db for:**  
**ACLM/"capable of": 208633 patents.**  
**Hits 1 through 50 out of 208633**

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Refine Search: acim"capable of"

PAT. NO.	Title
1 6,961,948	<b>T</b> Disk holding device
2 6,961,946	<b>T</b> Disc drive loading device
3 6,961,933	<b>T</b> Representation of Java data types in virtual machines
4 6,961,929	<b>T</b> Mechanism for automatic synchronization of scripting variables
5 6,961,906	<b>T</b> Method and system for switching between windows in a multiwindow computer environment
6 6,961,896	<b>T</b> Method and system for setting document-linked timed reminders
7 6,961,882	<b>T</b> Memory chip and apparatus for testing a memory chip
8 6,961,873	<b>T</b> Environment based data driven automated test engine for GUI applications
9 6,961,867	<b>T</b> Apparatus and method to provide data storage device failover capability
10 6,961,851	<b>T</b> Method and apparatus for providing communications security using a remote server
11 6,961,847	<b>T</b> Method and apparatus for controlling execution of speculations in a processor based on monitoring power consumption
12 6,961,846	<b>T</b> Data processing unit, microprocessor, and method for performing an instruction
13 6,961,816	<b>T</b> Disk array device with selectable method for generating redundant data
14 6,961,813	<b>T</b> System and method for providing multi-initiator capability to an ATA drive
15 6,961,811	<b>T</b> Apparatus and method to maintain information by assigning one or more storage attributes to each of a plurality of logical volumes
16 6,961,804	<b>T</b> Flexible techniques for associating cache memories with processors and main memory
17 6,961,775	<b>T</b> Method, system, and program for enabling communication between devices using different address formats

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The USPTO has issued over 208,633 patents with the phrase "capable of" present in the claims from 1976 to present. The most current of these was patent number 6,961,948, by Seki, et al., issued on November 1, 2005. Based on this extremely high number of issued patents, it is submitted that this must be normal USPTO practice. Thus, Applicant again traverses the objection, and requests reconsideration.

### 3. Information Disclosure Statement

Applicant notes that references submitted in the specification do not perform the function of an IDS. These proper IDS materials have been submitted a few days prior to this response via Express Mail.

### 4. Claim Rejections – 35 U.S.C. § 103(a)

Claims 8-16 and 29 stand "rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd, U.S. patent number 4,977,585." Applicant respectfully traverses these rejections as argued below, and respectfully requests reconsideration.

#### ***Prima Facie Obviousness***

4.1 MPEP § 2142 states the requirements regarding *prima facie* obviousness as follows:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both

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be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 -§ 2143.03 for decisions pertinent to each of these criteria."

To paraphrase MPEP § 2142, three criteria are required for a *prima facie* case of obviousness:

- 1) some suggestion or motivation to modify the reference or to combine reference teachings;
- 2) a reasonable expectation of success; and
- 3) the references must teach or suggest all the claim limitations.

With these requirements for a *prima facie* case of obviousness in mind, we now analyze the combination cited in the Office Action.

4.2 In the Office Action dated 9/21/05, the Examiner cites Boyd (in US patent number 4,977,585) and 21 CFR § 1020.40 as an alleged combination that would teach the claims in question. The Examiner is apparently alleging this combination would render obvious claims 8-11, 13, and 29. The Examiner provides nothing other than mere conclusory language to reach this result, stating only "It would have been obvious to one of ordinary skill in the art at the time the invention was made" to use 21 CFR § 1020.40. In this conclusion, the Examiner engages in improper hindsight analysis.

#### **Analysis of Cited Combination Components**

4.3 21 CFR § 1020.40(c)(1)(i) reference compared to Boyd

The 21 CFR § 1020.40(c)(1)(i) reference is cited by the Examiner. A quick inspection of 21 CFR § 1020.40(c)(1)(i) does in fact read:

"Radiation emitted from the **cabinet x-ray** system shall not exceed an exposure of 0.5 milliroentgen in one hour at any point five centimeters outside the external surface." (bold emphasis added)

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It should be obvious that 21 CFR § 1020.40(c)(1)(i) thus relates only to "cabinet x-ray" systems. The relevant code section 21 CFR § 1020.40(b)(3) states the definition of cabinet x-ray systems as follows:

**"Cabinet x-ray system** means an x-ray system with the x-ray tube installed in an enclosure (hereinafter termed cabinet) which, independently of existing architectural structures except the floor on which it may be placed, is intended to contain at least that portion of a material being irradiated, provide radiation attenuation, and **exclude personnel from its interior during generation of x radiation**. Included are all x-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad, and bus terminals, and in similar facilities. An x-ray tube used within a shielded part of a building, or x-ray equipment which may temporarily or occasionally incorporate portable shielding is not considered a cabinet x-ray system." (bold emphasis added)

Thus, a fair reading of cabinet x-ray system would "exclude **personnel** from its interior during generation of x radiation" as cited above. The exclusion of **personnel** from its interior would then absolutely contradict the combination of 21 CFR § 1020.40(c)(1)(i) with the Boyd reference, as Boyd is used to x-ray human subjects during operation (see Boyd column 3, lines 10-17, as well as indicated in Figures 1, 2, and 4, and arguably a cross section of a human body in Figure 3):

FIG. 4 shows the **x-ray radiation 32** from the tube 17 passing through the opening 33 in the lead tunnel and **penetrating the body of the patient**. The transmitted radiation passes through a slot 33 in the lining 31. The transmitted x-rays are detected by the detector array 18. The detector output is stored and processed to form an image of the patient. (bold emphasis added)

Therefore, Boyd teaches x-ray radiation penetrating the body of the patient, while 21 CFR § 1020.40(c)(1)(i) states that personnel should be excluded. The

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Applicant would suggest that these references are thus antithetical and completely contradictory, and would certainly not provide any suggestion or motivation for combination, the first requirement for a *prima facie* case of obviousness.

#### **Lack of Reasonable Expectation of Success**

4.4 The second requirement, a reasonable expectation of success by combining the references, is not even addressed by the Examiner. The 21 CFR § 1020.40 statute merely states a regulatory limit, not how it would be implemented or achieved. There is no structure, no method, no hardware, or indeed anything teaching how Boyd may be combined with the statute to achieve Applicant's rejected claims. Most tellingly, the Examiner fails to even address the issue whether the combination would have "a reasonable expectation of success", again failing to address one of the three *prima facie* elements required.

#### **All Limitations Not Taught**

4.5 On the third requirement for a *prima facie* case of obviousness, that the prior art references "must teach or suggest all the claim limitations", the Examiner fails to make anything close to a compelling argument as to why the limitation: "wherein said means for shielding has a mass of less than 200 kg." The Examiner states that "since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art". (Office Action, page 4, lines 5-7)

The Examiner has not stated the general conditions of the claim disclosed in the prior art. Rather, the Examiner merely states "it would have been obvious to one of ordinary skill in the art at the time the invention was made to use ...less shielding material". (Office Action, page 4, lines 2-4) Such a conclusory statement finds no basis in the Boyd patent or the 21 CFR § 1020.40 statute.

Further, with respect to the limitations of means for shielding having a mass less than 200 kg, 14 kg, 10 kg, or 8 kg, the Examiner has made no

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argument regarding "a reasonable expectation of success". Typically, less shielding is less effective in blocking x-ray transmissions. Thus, without the teachings of Applicants, there would not have been a reasonable expectation of success in just the arbitrary reduction of shielding means mass.

In this Application, less shielding results in a lower mass of shielding, but maintains the limitation of: "wherein said means for shielding limits external exposure of ionizing radiation produced by said source of ionizing radiation to a level at or below 0.5 milliroentgen per hour at any point 5 centimeters outside an external surface of said imaging device" (Claim 8, lines 7-10). This is a nonobvious result over the extant art.

Further along in this vein, the Examiner has provided no prior art reference that "must teach or suggest all the claim limitations" relating to shielding means mass. Rather, the Examiner has relied on the argument that "it would have been obvious ...to use...less shielding" (Office Action page 4, lines 2-3). Such an argument presupposed the invention, which is the hallmark of hindsight-based obviousness.

For these reasons, Applicant respectfully requests reconsideration of the rejected claims.

#### **Dependent Claims**

4.5 Based on the arguments above relating to independent Claim 8, it is submitted that dependent claims 12 and 14-16 are also nonobvious. No additional arguments are being presented for these dependent claims at this time.

#### **5. Claim Rejections – 35 U.S.C. § 103(a)**

Claims 29-33 variously stand "rejected under 35 U.S.C. 103(a) as being unpatentable over" a number of references. Applicant has amended Claim 29 to render these rejections moot. Applicant respectfully requests reconsideration based on the amended base claim.



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**6. Additional Claim Fees**

No claims have been added, therefore there is no additional claim fee.

**7. Response to Notice of Non-Compliant Amendment**

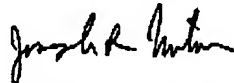
A typographical correction in the specification previously cited in a Notice of Non-Compliant Amendment mailed 11/10/2005 has hereby been resubmitted in a corrected form. No new matter has been introduced.

**8. Conclusion**

In view of the above, Applicant has fully responded to the Office Action. It is believed that all pending claims are now in a condition for immediate allowance.

Date: November 15, 2005

Respectfully submitted,



Joseph R. Milner, Ph. D., Reg. No. 42,896  
Lawrence Berkeley National Laboratory  
One Cyclotron Road, Mail Stop 90B0104  
Berkeley, CA 94720  
(510) 486-4672